

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001222**Date Inspected:** 23-Dec-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 730**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Orthotropic Box Girders (OBG).

Bay 7 OBG:

The QA Inspector randomly observed ZPMC welder Wang Changfa ID Number 058102, utilizing the Shielded Metal Arc Welding (SMAW) Process with ZPMC approved Weld Procedure Specification (WPS) WPS-B-P-2112 in the 2F position to tack weld Flange Plate X7G to Floor Beam Web FB015-04, Plates X48A + X48B + X16A at Weld Joint (WJ) FB015-04-001. The QA Inspector randomly observed ZPMC CWI Cui Yi Ru, monitoring weld parameters. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welder Ren Jinzhu ID Number 044837, utilizing the SMAW Process with ZPMC approved WPS WPS-B-P-2112 in the 2F position to tack weld Flange Plate X7G to Floor Beam Web FB015-02, Plates X48A + X48B + X16A at WJ FB015-02-001. The QA Inspector randomly observed ZPMC CWI Cui Yi Ru, monitoring weld parameters. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welder Chen Chuanzong ID Number 044824, utilizing the Flux Cored Arc Welding (FCAW) Process with ZPMC approved WPS WPS-B-T-2231-B-U2-F-1 in the 1G position to

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weld the root pass in WJ FB018-01-078, 079 to Floor Beam Sub-Assembly FB018-01, Plates X12E (T=18 F2) + X18B (T=18 F2) + 20A + 20B (T=12 T2 to X22A T=14 F2). The QA Inspector randomly observed ZPMC CWI Cui Yi Ru monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: welding amperage 269 amps, welding voltage 30.2 volts with a travel speed of 505 Millimeters (mm) per minute. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Yang Xuhe ID Number 057795, utilizing the SMAW Process with ZPMC approved WPS WPS-B-P-2112 in the 1G position to tack weld Floor Beam FB021-02 Sub-Assembly Sections X29A (T=18 F2) + X19B (T=12 T2) + X19C (T=12 T2) to X21B (T=14 F2) SPCM, at WJ FB021-02-078, 079. The QA Inspector randomly observed ZPMC CWI Cui Yi Ru, monitoring weld parameters. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

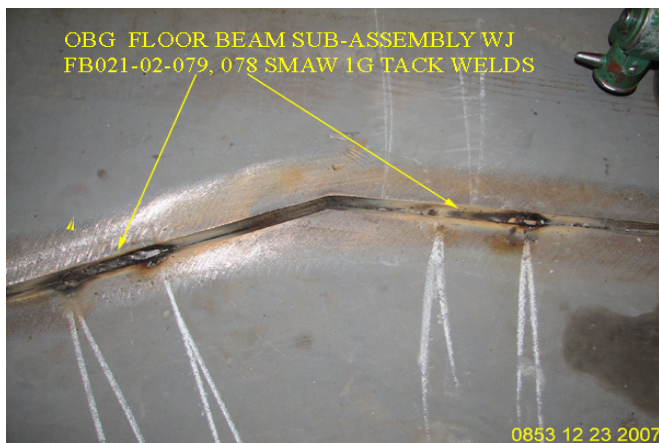
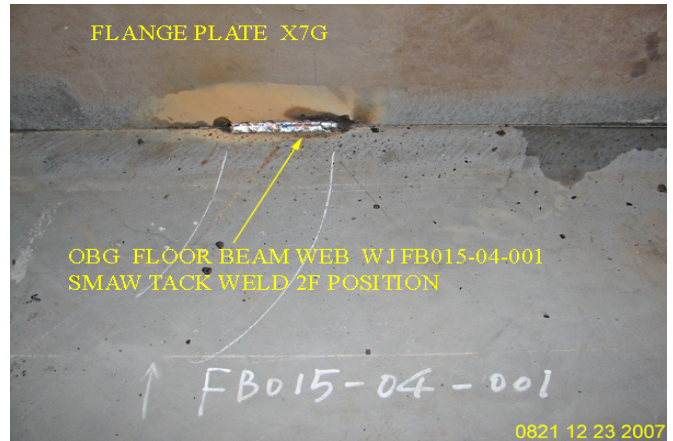
The QA Inspector randomly observed ZPMC welder Huang Xinlan ID Number 044780, utilizing the Submerged Arc Welding (SAW) Process with ZPMC approved WPS WPS-B-T-2221-B-L2c-S-1 in the 1G position to weld the fill and cover pass in Floor Beam Sub-Assembly FB018-01 at WJ's FB018-01-078, 079; Plates X12E (T=18 F2) + X18B (T=18 F2) + 20A + 20B (T=12 T2 to X22A T=14 F2). The QA Inspector randomly observed ZPMC CWI Wu Ming Kai monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: welding amperage 530 amps, welding voltage 31.2 volts with a travel speed of 445 mm per minute. The weld parameters appeared to comply with contract requirements. The attached photographs provide additional detail.

The QA Inspector randomly observed ZPMC welder Chen Chuanzong ID Number 044824, utilizing the FCAW Process with ZPMC approved WPS WPS-B-T-2231 in the 1G position to weld the root pass in Floor Beam FB021-02 Sub-Assembly Sections X29A (T=18 F2) + X19B (T=12 T2) + X19C (T=12 T2) to X21B (T=14 F2) SPCM, at WJ FB021-02-078, 079. The QA Inspector randomly observed ZPMC CWI Cui Yi Ru, monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: welding amperage 530 amps, welding voltage 31 volts with a travel speed of 430 mm per minute. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC Welding Personnel performing heat straightening operations per HSR1(B)-004 on Floor Beam Sub-Assembly FB007-03 at WJ FB007-02-021, 026 Plates X46A + 46C+ X14A. The attached photograph provides additional detail.

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## Summary of Conversations:

There were no relevant conversations.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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**Inspected By:** Franco,Charlie

Quality Assurance Inspector

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**Reviewed By:** Cochran,Jim

QA Reviewer